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Adventure therapy and its impact on the functioning of youth in a community setting

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ABSTRACT
The purpose of this article is to explore the impact of one type of activity-based group work, adventure therapy (AT) group practice, on youth in a community-based mental health setting. Using data collected from Adventure Works, a nonprofit outdoor behavioral healthcare and adventure therapy counseling center, this article explores treatment outcomes to identify the effectiveness of adventure therapy group interventions. AT has been identified as an effective intervention within wilderness and residential settings, but little research exists focusing on adventure therapy in a community setting. Data collected shows positive outcomes for youth participating in adventure-based group therapy. Research and practice implications are discussed.

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Approximately one half of all diagnosed mental health concerns found in adults reportedly begin by age 14 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2017). Research consistently shows that children with mental health concerns are at risk of poor long-term outcomes such as early dropout rates, homelessness, incarceration, and underemployment (SAMHSA, 2017). Suicide is the third leading cause of death among youth ages 15 to 24 (SAMSHA, 2017). Despite the need, effective and accessible treatment options remain elusive for many adolescents struggling with mental health issues. In 2014, only 41.2% of adolescents who reported at least one major depressive episode received treatment or counseling for depression within the preceding year (SAMHSA, 2017). Given the prevalence of mental health issues and the risks of these issues left untreated, it is important to find accessible and effective interventions for the many young people suffering from mental health issues.

In an effort to address the needs of youth, social workers have a long history of utilizing activity-based groups for engaging youth in clinical change including dance (Kaplan, 2002), art (Kelly & Doherty, 2017), rap and music (DeCarlo &
Hockman, 2004; Kelly & Doherty, 2017; Olson-McBride & Page, 2012), as well as camping (Collins, 2004). Built on this tradition, Adventure Therapy (AT) is an emerging intervention used by clinical social workers in a variety of settings which may also be an effective alternative for at-risk youth (Norton & Tucker, 2010; Tucker & Norton, 2013; Tucker, Norton, Itin, Hobson, & Alvarez, 2016). AT is an activity-based group intervention that utilizes adventure activities to promote change in clients (Alvarez & Stauffer, 2001; Tucker, 2009). Currently, clinical social workers are engaged in the continuum of care that exists in adventure therapy from residential, wilderness therapy programs to community-based AT interventions (Tucker & Norton, 2013; Tucker, Norton et al., 2016). For youth who are significantly acute and need out-of-home placements, there has been a growing recognition in social work of the effectiveness of wilderness therapy interventions in which clients are immersed in a backcountry wilderness setting during treatment (Bettmann, Gillis, Speelman, Parry, & Case, 2016; Tucker, Combs et al., 2018). Research on wilderness therapy has reported positive outcomes in self-esteem, locus of control, resilience, and clinical mental health outcomes (Bettmann et al., 2016; Bowen & Neill, 2013; Norton et al., 2014). Some criticisms of traditional residential or wilderness-based treatment options are the limitations of removing children from the home, the cost of out-of-home care, and limited accessibility to individuals who may need it the most (Becker, 2010; Scott & Duerson, 2010). Hence, there is a need to identify treatment options to better meet the needs of youth whose families are unable to afford wilderness care. In addition, treatment options that can be accessed before youth require out-of-home placements may serve as an early intervention strategy for youth with mental health concerns.

**Adventure therapy and community-based mental health**

**Adventure therapy**

Types of AT group interventions range from wilderness therapy to adventure-based group therapy (Tucker, 2009; Tucker, Norton et al., 2016). Adventure-based group activities can include a wide array of games, problem-solving initiatives, challenge course activities, hiking, canoeing, as well as extended backcountry expeditions. AT derives its theoretical and philosophical roots from experiential education (Schoel & Maizell, 2002). The Association for Experiential Education (AEE; 2017) defines experiential education as “a philosophy that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people’s capacity to contribute to their communities” (para. 2). The use of experiential education in therapeutic settings seeks to allow clients to actively engage in the therapeutic process, elicit motivation from clients, provide opportunities for meaningful natural consequences, and offer clients time for reflection and transfer of learning (Norton et al., 2014). The goal of AT is to
integrate traditional therapeutic group therapy methods with experiential activities that address specific therapeutic goals. AT can be characterized by seven key elements (1) engagement in action-centered therapy, (2) the use of an unfamiliar or novel environment or situation, (3) maintenance of a climate of change, (4) use of activities as continual assessment tools, (5) creation of a caring community, (6) a solution-focused approach, (7) a shift from clinician as expert to clinician as facilitator to allow for a flexible therapeutic relationship (Gass, Gillis, & Russell, 2012; Tucker, 2009).

Group activities within AT are designed by the clinicians to act as kinesthetic metaphors of the client and/or group’s treatment goals (Gass et al., 2012). Clinicians use connective language to tailor adventure activities to tap into specific affective, behavioral, or cognitive resources that reflect the types of issues clients face in their lives (Gass et al., 2012). For example, climbing up a rock wall is not necessarily just a physical challenge, but that wall may represent those obstacles in the clients’ life that they need to overcome. Climbing can’t be successful without the support of group members through spotting as well as belaying of a climber (Tucker, 2009), similar to how dealing with obstacles in a client’s life can’t be managed without using existing supports or building new support systems. In this way, the successful outcome of the therapeutic issue or goal for the clients in the group requires thoughts, emotions, and behaviors that run parallel to the successful completion of the activity (Gass et al., 2012). AT allows the group members to become an active participants in the group process and allows reflection on life experiences rather than passive approaches to therapy (Tucker, 2009). In fact, research suggests that AT can be effective even for resistant clients who come to treatment without the readiness to change (Bettmann, Russell, & Parry, 2013). Participants in AT are given the opportunity to learn from their own feelings and behaviors as well as those of their peers through engaging in experiential activities and receiving feedback from peers as well as therapists. AT groups are flexible and adaptable in nature, making them a good fit for community-based practice (Tucker, 2009). AT is a natural fit for social work group practice with its holistic focus on the persons and their environment as well as its flexible nature that allows clinicians to adapt to client needs that present when they show up for treatment (Alvarez & Stauffer, 2001; Lung, Stauffer, & Alvarez, 2008; Tucker, Norton et al., 2016). With its strength-based focus, adventure-based groups allow participants to recognize their own internal and external assets as well as those of other group members and apply these to the experience thereby strengthening and practicing important skills such as empathy, self-efficacy, and cooperation (Gass et al., 2012). By practicing these skills in real time with a therapist present, group members are able to reflect on how these skills will can transfer into their own lives and relationships outside of the therapy group (Gass et al., 2012). The process of AT
creates an atmosphere in which participants rely heavily on strong relationships built between peer members and group facilitators allowing insight into intra- and interpersonal issues (Gass et al., 2012).

**Research on AT in the community**

To date, research is limited looking at the impact of AT in a community setting, and there is minimal literature describing how AT is applied in a community setting. Tucker, Javorski, Tracy, and Beale (2013) found that youth who participated in AT in a community-based mental health setting showed significantly higher decreases in problem severity when compared to those without AT. The effects were especially strong among African American and female youth. Clients in this study who participated in AT also had a higher likelihood to be considered “recovered” at discharge compared to clients who participated in other types of counseling. Similarly, in Koperski, Tucker, Lung, and Gass’ (2015) study on the impact of AT for adults, participants reported decreased stress, increased coping skills, and increased therapeutic rapport with the therapist over the course of treatment. Wolf & Mehl, 2011), found ropes course elements to be effective in reducing anxiety and improving self-efficacy in youth.

Even considering the few research studies in this area, AT is still being utilized by many clinicians within therapeutic settings, but little is described in the social work literature. A random sample of 646 clinical social workers in the National Association of Social Workers showed that more than one third of the sample (35.1%) reported the use of adventure-based activities for therapeutic purposes with clients (Tucker & Norton, 2013). Hence, it is important to continue to evaluate the impact of AT on youth in a community setting and understand these program models so we can build up the empirical base of this intervention and understand better how it impacts clients. To fill this gap in the social work literature, this article describes in depth one application of social work AT in the community and looks at the changes from intake to discharge for youth attending Adventure Works, a community-based adventure therapy group program located in DeKalb, Illinois. Specifically, it sought to see if there were improvements after participation in youth clients and if there were differences based on client gender and/or race.

**Methods**

**Adventure Works intervention**

Adventure Works, founded in 2010 by a clinical social worker, utilizes a community-based model of adventure therapy to serve vulnerable populations within DeKalb County, Illinois, through individual, family, and group therapy (Adventure Works, 2017). It serves approximately 120 to 150 youth each year in
DeKalb County (Adventure Works, 2017). Adventure Works serves youth with a variety of mental health concerns and adapts programming to fit clients based on their needs and the severity of mental health concerns. Families within DeKalb county are able to access services for their youth without the barriers of expensive treatment options or out-of-home placements. The mission of Adventure Works is “guiding youth in overcoming life challenges through adventure-based counseling and education” (Adventure Works, 2017).

Clients at Adventure Works are most frequently referred by school counselors, other mental health agencies, or self-referrals. All clients complete a 60- to 90-minute psychosocial intake assessment session. Following the initial intake session, clients begin their first group session within 2 weeks. The youth are then placed into groups based on age and treatment goals. Clients then continue to receive group services on a weekly or biweekly basis to work on their goals. Every 90 days, clients complete a treatment plan update.

**Group structure**

Groups consist of an average of five to six youth and two facilitators. One facilitator is a licensed clinician or master’s-level outdoor educator and the other is a clinical intern in training or trained staff/volunteer facilitator. Participants are added and terminated from groups on a rolling basis in accordance with their time of intake and discharge. Similar to other outpatient services, youth remain in groups until they achieve their treatment goals, are referred for other services, or choose to terminate on their own.

Youth are put in middle school or high school age groups that are assigned based on their treatment goals. For example, clients with goals focused on emotional regulation are grouped together whereas clients with goals around behavioral regulation are in another group. Group sessions range in time from 60 to 180 minutes, meeting on a weekly or biweekly basis, with the expectation that participants complete at least 12 sessions. With consultation between clinical staff, the youth, and the youth’s parents/guardians, many participants continue beyond their initial recommended 12 sessions.

**AT activities and group process**

Groups participate in a variety of AT activities (see Table 1). Each activity has a corresponding therapeutic metaphor that is processed and generalized to the group members’ everyday lives with a focus on the applications to their specific goals (Tucker, 2009). By accomplishing adventure activities or tasks within a therapeutic environment, clients are able to practice important skills in a supportive group environment and a novel setting that can serve to increase clients’ motivation for working toward therapeutic goals (Gass et al., 2012). Participating in groups allows clients to gain a better understanding of the cause and effect of their own actions and emotional energy in terms of the relationships with their peer group and in accomplishing the task at hand (Gass et al., 2012). AT groups
provide immediate and tangible learning opportunities for clients to receive direct feedback from the therapist and other group members (Tucker, 2009). These activities provide opportunities for clients to practice autonomy, through inquiry and reflection on one’s own actions; competence, through skill acquisition and problem solving; and relatedness, through relationships with peers and therapists (Gass et al., 2012). Once the group begins the activity, facilitators constantly assess group and individual needs, promote safety, and guide the clients toward change (Alvarez & Stauffer, 2001). By exposing groups to unique and challenging situations, therapists are able to encourage clients to build and strengthen new skills to help successfully complete tasks. In addition, group participation in adventure activities allows group members to recognize similar feelings, fears, desires, thoughts, and behaviors in their peers within the group while working cooperatively on group tasks (Schoel & Maizell, 2002). Following the activity, group members and facilitators discuss the experience with a key focus toward generalizing experiences to their everyday lives.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Accompanying Therapeutic Metaphors</th>
<th>Example Process Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery</td>
<td>Personal values and supports</td>
<td>What was it like visualizing attaining your goal?</td>
</tr>
<tr>
<td>Stance</td>
<td>Prioritizing</td>
<td>What are your targets in life?</td>
</tr>
<tr>
<td>Grip</td>
<td>Goal setting</td>
<td>How do you calm and control yourself?</td>
</tr>
<tr>
<td>Sight</td>
<td>Mindfulness and awareness</td>
<td>When do you find yourself most aware?</td>
</tr>
<tr>
<td>Alignment</td>
<td>Emotional and behavioral control</td>
<td></td>
</tr>
<tr>
<td>Sight Picture</td>
<td>Relaxation and focus</td>
<td></td>
</tr>
<tr>
<td>String Release</td>
<td>Responsibility, consistency, and action</td>
<td></td>
</tr>
<tr>
<td>Breathing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow Through</td>
<td>Teambuilding, communication,</td>
<td></td>
</tr>
<tr>
<td>Ball-Webbing-Hoop Initiatives</td>
<td>collaboration, and problem-solving</td>
<td>What things helped the group to be most successful?</td>
</tr>
<tr>
<td>Canoeing</td>
<td>Self-control and problem-solving</td>
<td>What do you need to do mentally and physically for yourself to move the boat in the direction you wanted?</td>
</tr>
<tr>
<td>Paddle and boat control</td>
<td>Communication and conflict resolution</td>
<td></td>
</tr>
<tr>
<td>Partner Collaboration</td>
<td>Goal setting, planning, awareness, finding purpose, and meaning making</td>
<td></td>
</tr>
<tr>
<td>Orienteering</td>
<td>Persistence, motivation, action, planning, mindfulness, intentional relaxation, fear management, problem-solving, frustration tolerance, and understanding limits</td>
<td>How do you work through challenges when you experience fear or apprehension?</td>
</tr>
<tr>
<td>Rock Climbing</td>
<td>Finding and creating safety, recognizing and utilizing resources, and awareness of basic physical and emotional needs</td>
<td>How do you know when you’ve reached your limit?</td>
</tr>
<tr>
<td>Shelter Building</td>
<td>Cost-benefit analysis, problem solving, mindfulness, collaboration, and communication</td>
<td>Where do you feel most safe or who do you feel most safe with?</td>
</tr>
<tr>
<td>Wilderness Challenge</td>
<td></td>
<td>What is your decision-making process and what guides your decisions?</td>
</tr>
</tbody>
</table>
**Procedure**

Adventure Works is a member of the Outdoor Behavioral Healthcare Council through which they contribute to the National Association of Therapeutic Schools and Programs (NATSAP) Practice Research Network (PRN) (Tucker, Zelov, & Young, 2011). The NATSAP PRN is an ongoing database of outcomes from more than 50 programs including residential treatment centers, wilderness therapy programs, and community-based AT programs. This exploratory study used a preexperimental pretest posttest design (Rubin & Babbie, 2017). To slowly roll out an evaluation plan in this setting, this study was a pilot program that focused specifically on youth who attended after school therapy groups with the clinical director of the program. Hence clients who participated exclusively in individual therapy or school-based therapy groups at Adventure Works were excluded from our sample due to differences in the curriculum and treatment practices of these client groups. In addition, Adventure Works is a community-based mental health setting and, as such, follow-up data is often difficult to obtain due to attrition (Tucker et al., 2013). This sample includes 53% of the clients for whom intake data were collected. Attrition analysis showed no significant differences in terms of age, gender or race between the two groups.

Clients were asked to fill out the Youth Outcomes Questionnaire Self-Report (Y-OQ SR) at intake and again every 3 months until discharge. This study compared data from intake to discharge to see changes in functioning for youth clients. If clients were not present for a termination session, then their last completed Y-OQ SR was used as their final outcome measurement. Informed consent was first obtained from the participants’ parents/guardians at intake, then assent was obtained from youth clients before participating in this study. This study was approved by the Institutional Review Board at the first author’s institution.

**Measure: Youth Outcomes Questionnaire Self-Report 2.0**

Mental health functioning of the clients attending Adventure Works groups was assessed using the Youth Outcomes Questionnaire Self Report (Y-OQ SR 2.0) (Burlingame et al., 2005). The Y-OQ SR is a global measure of adolescent functioning designed to measure treatment progress for children and adolescents (Burlingame et al., 2005). This scale includes 64 items and is designed to assess youth ages 13 to 18 years and has a history of strong psychometric properties (Burlingame et al., 2005). This instrument measures overall functioning (Total Score) and has six subscales including: (1) Intrapersonal Distress, (2) Somatic Symptoms, (3) Interpersonal Relationships, (4) Social Problems, (5) Behavioral Dysfunction, and (6) Critical Items.
**Sample**

This study included a sample of 42 youth ages 11 to 18 who participated in Adventure Works group therapy between October 2013 and August 2017. The sample consisted of 64.3% males and 33.3% females with one transgender client (2.4%). The majority of clients were White (69%), with five African American clients, one Asian client, two Hispanic clients, one multiracial client, and three clients identifying as “Other.” Of the sample of clients, 78.6% of clients were participating only in Adventure Works therapy groups whereas 21.4% of the clients were also seeing an individual counselor at the time of treatment. At intake, the average age of participating clients was age 14.5 years ($SD = 1.7$). The sample used was reflective of overall agency demographics.

**Findings**

**Change over time across gender**

To look at change over time as well as the impact of gender on change over time $2 \times 2$ repeated-measure ANOVAs were run looking at Time (Intake/Discharge) x Gender (Male/Female) for the Total Y-OQ SR score and six subscales. Table 2 shows the means at Intake and Discharge as reported by youth for the Y-OQ SR total score as well as each of the six subscales, and Figure 1 shows the means across time between males and females.

For the overall Total Y-OQ SR Score, significant main effects were found for Time, $F(1, 40) = 5.675$, $p = .023$, $\eta^2 = .124$, and Gender, $F(1, 39) = 5.358$, $p = .026$, $\eta^2 = .121$; however there was no interaction effect found. Hence, in terms of overall functioning, youth significantly improved from intake to discharge, and there were mean differences between males and females. When looking at the subscales, two main effects for Time were found. Youth reported significant improvements from intake to discharge in terms of interpersonal relations, $F(1, 40) = 5.363$, $p = .026$, $\eta^2 = .121$, and critical items, $F(1, 40) = 7.383$, $p = .010$, $\eta^2 = .159$. For main effects for Gender across the subscales there were three significant main effects found for intrapersonal distress, $F(1, 39) = 9.932$, $p = .003$, $\eta^2 = .203$, somatic issues,

<table>
<thead>
<tr>
<th>Y-OQ SR 2.0 Youth Self Report</th>
<th>$M_{initial}$ $(SD)$</th>
<th>$M_{Discharge}$ $(SD)$</th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score</td>
<td>45.29 (29.21)</td>
<td>40.24 (25.18)</td>
<td>5.68</td>
<td>.023</td>
<td>.124</td>
</tr>
<tr>
<td>Critical Items</td>
<td>6.48 (5.65)</td>
<td>4.86 (3.99)</td>
<td>7.38</td>
<td>.010</td>
<td>.159</td>
</tr>
<tr>
<td>Behavioral Dysfunction</td>
<td>11.29 (6.40)</td>
<td>10.60 (5.67)</td>
<td>1.08</td>
<td>.303</td>
<td>.026</td>
</tr>
<tr>
<td>Social Problems</td>
<td>1.90 (3.49)</td>
<td>2.00 (3.78)</td>
<td>0.05</td>
<td>.827</td>
<td>.001</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>3.40 (5.33)</td>
<td>1.88 (4.49)</td>
<td>5.36</td>
<td>.026</td>
<td>.121</td>
</tr>
<tr>
<td>Somatic</td>
<td>5.88 (4.39)</td>
<td>5.40 (3.85)</td>
<td>.731</td>
<td>.398</td>
<td>.018</td>
</tr>
<tr>
<td>Intrapersonal Distress</td>
<td>16.33 (13.04)</td>
<td>15.50 (11.51)</td>
<td>.452</td>
<td>.505</td>
<td>.011</td>
</tr>
</tbody>
</table>

*Note. Y-OQ SR 2.0 = Youth Outcome Questionnaire Self Report 2.0.*
**Figure 1.** Changes over time across Y-OQ SR total and subscales across gender.  
Note. Y-OQ SR 2.0 = Youth Outcome Questionnaire Self Report 2.0

\[ F(1, 39) = 9.156, p = .004, \eta^2 = .190, \] and critical items, \[ F(1, 39) = 8.159, p = .007, \eta^2 = .173. \] Females in the study at intake and discharge reported higher means for Total score and subscales of Intrapersonal Distress, Somatic and Critical Items than males, differences that were consistent across time. There was only one significant interaction effect for Time x Gender for the subscale of Social Problems, \[ F(1, 39) = 6.853, p = .013, \eta^2 = .149. \] Males reported a slight increase in social problems from intake to discharge (\( M = 2.11, SD = 3.6, \) vs. \( M = 2.96, SD = 4.0 \)), whereas females reported a larger decrease from intake to discharge (\( M = 1.5, SD = 3.5 \) vs. \( M = .07, SD = 2.6 \)).

**Change over time across race**

To look at the impact of race on change across time, additional repeated-measures ANOVAs were conducted. Due to the low frequency of youth in the various racial categories that were not White, race was collapsed into White (\( n = 29 \)) and non-White (\( n = 13 \)). Hence, Time (intake/discharge) x Race (White/non-White) repeated-measures ANOVAs were conducted. Again, main effects for Time were found for the Total Y-OQ SR score and the subscales of Interpersonal Relations and Critical Items; however, there were no main effect for Race or significant interaction effects for Time x Race for the Total Y-OQ SR score or any of the six subscales. Hence race did not seem to affect the changes across time for this group.
**Discussion**

This article describes in-depth one application of social work adventure therapy in the community setting, Adventure Works, and looks at the changes from intake to discharge for youth participants. Analysis of the data collected showed improvement for clients who participated in AT groups in overall functioning (Total Score) as well as in the areas of interpersonal relations and critical items. These findings suggest that AT in a group setting may be an effective form of treatment for youth struggling with mental health concerns like previous research of AT (Koperski et al., 2015; Tucker et al., 2013) showing significant improvements for participants after engaging in adventure therapy in an outpatient setting. Hence, this research builds upon this previous work and adds to the foundational evidence supporting AT as an effective intervention in a community setting for social workers and other mental health practitioners.

In addition, there were mean self-reported improvements in youth’s interpersonal relations. This subscale measured changes in the youth’s relationships with parents, other adults, and peers as well as the attitude toward others as well as interactions with friends including aggressiveness, arguing, and defiance (Tucker et al., 2011). These findings align with the group format of AT as well as its goals of teaching group teamwork, communication, and problem solving (Schoel & Maizell, 2002). In fact, it has been used specifically to improve social skills in youth (Tucker, 2009). AT is a group intervention that provides opportunities for youth to engage with each other through activities that often require positive social skills for group success; hence the adventure group is a learning lab that gives youth opportunities to practice social skills (Karoff, Tucker, Alvarez, & Kovacs, 2017; Tucker, 2009). Unlike talk therapy where clients report their interactions with their peers retrospectively, facilitators see in real time their skilled or unskilled behaviors, which allows targeted goals around communication and social skills to emerge naturally throughout the therapeutic process (Tucker, 2009; Tucker, Norton et al., 2016).

Youth also reported overall mean improvements over time in the subscale of Critical Items that assessed acute areas of dysfunction where stabilization is sought like suicide, mania, and eating disorder issues (Tucker et al., 2011). Overall, it is important to note that youth participants did not have an elevated mean level of Critical Item issues at intake, which was even lower at discharge, really supporting the idea that youth at Adventure Works on average were less critical or in crisis than youth who may need residential care. In fact, the overall Y-OQ SR mean at intake of 45 for youth in this study is almost one half as large as youth reports at intake for wilderness therapy programs and an intake level of six for Critical Items was more than three points lower (Bettmann et al., 2013). Despite, the lower level of acuity, it is important to note, that these findings
suggest AT may be effective in stabilizing its youth participants who are experiencing higher levels of psychiatric need and may possibly be an early intervention strategy to avoid residential care. Clearly more research is needed with more youth to support this.

When looking at gender, females reported to enter treatment more acute than males in certain areas including intrapersonal distress, somatic and critical items, despite these differences, males and females improved in these areas similarly as shown by a lack of interaction between Time x Gender. It is unclear why females were more acute than males at intake, but in AT, especially wilderness settings, research has shown consistently that females enter treatment more acute than their male counterparts in similar areas on the Y-OQ SR (Tucker, Paul, Hobson, Karoff, & Gass, 2016). It is unclear why this is the trend; but it may possibly be due to the perceived risk of AT and its outdoor focus, hence parents and providers may be more hesitant to refer females to this type of program. Historically, outdoor education and skill building in an outdoor setting has been reserved for males (Grey & Mitten, 2018), so parents may wait until their girl is more acute than a boy to send them to such a program. Clearly more research is needed to understand this dynamic.

One finding that is particularly interesting to note is that females reported significant improvement in social problems, whereas there seemed to be little to no change for males in this area, males reported a higher level of social problems. As measured by the Y-OQ SR, Social Problems assessed changes in problematic behaviors that are socially related, including truancy, sexual problems, running away from home, destruction of property, and substance abuse (Tucker et al., 2011). Although this finding is unclear, it may be due to ways in which mental health issues present in males versus females. Unlike the subscales of Intrapersonal Distress and Somatic, areas in which females were more acute than males, Social Problems assessed more externalizing behaviors that are often more prominent in males in treatment and internalizing tends to be higher for females (Tucker, Paul et al., 2016), hence more research is needed to understand if indeed these are issues due to patterns in the types of symptoms that emerge due to gender.

**Limitations**

There are several important limitations in this study. First of all, because this is a preexperimental research design without a comparison group, it is not possible to say with certainty that changes reported by youth are due to the intervention and not due to other threats to the interval validity of the study. In addition, as an exploratory program evaluation, we understand that our findings are limited by the sample size, attrition, and a lack of follow-up data, which restricts are ability to externalize our findings to all AT interventions in the community or be confident that changes will last over time for youth participants.
Implications for practice

Despite these limitations, this study builds upon previous research on AT in community settings suggesting it as alternative group intervention for youth whose mental health needs are often left unmet (SAMHSA, 2017). In fact, social work practitioners are already aware of adventure therapy as an activity-based group intervention for youth (Karoff et al., 2017; Tucker & Norton, 2013; Tucker, Norton et al., 2016), and this study provides practitioners with an additional example of how to incorporate adventure activities into existing group interventions. AT builds upon traditional group therapy but focuses less on talking and more on doing. This holistic and kinesthetic engagement creates an environment that feels less like “therapy” than traditional individual or group work (Russell & Phillips-Miller, 2002). In AT the role of the group leader or clinician changes, in that the therapist is less of an expert but more a guide, sharing the experience with the group and its participants (Gass et al., 2012). In addition, one of the main tools of the treatment is the activities themselves, and it is the facilitators responsibility to choose wisely the activities that will both engage the group and work toward client and group goals (Alvarez & Stauffer, 2001; Lung et al., 2008). In AT this is often done using parallel processes, where the challenges inherent in the adventure activities (hiking a mountain, climbing a rock wall, canoeing, etc.) reflect the challenge in the groups members’ lives. It is up to the group to use their individual and collective resources to meet these challenges and the group worker to guide the group in recognizing these parallels to promote the transfer of this learning into clients’ lives (Gass et al., 2012). Hence, due to the unique aspects of AT including attention to physical safety, it is important for group workers to be properly trained in not only group therapy and group work, but also in how to facilitate adventure activities (Tucker & Norton, 2013).

With the right training, AT can be integrated into any social work setting, but especially in groups with children and adolescents. Unlike more traditional wilderness models, AT in a community setting is flexible and requires limited resources to bring the benefits of this kinesthetic group intervention to young clients (Tucker, 2009). For example, adventure groups can be facilitated in a classroom, in a gym, on a field, in a clinical office, at a local park or any green space within a community (Karoff et al., 2017; Tucker & Norton, 2013; Tucker, Norton et al., 2016). In addition, active interventions for youth are developmentally appropriate and perhaps needed even more today considering the rise of technology and its use and even abuse among children and youth.

Hence, future research is essential to say with confidence that AT in a community setting is indeed an effective and evidence-based practice with youth. Compared to wilderness therapy, research on AT in the community is still in its infancy. Yet, due to the high cost and lack of accessibility of
wilderness interventions that have shown to be effective, research on AT in community settings would open more avenues for youth to get the care that they need and even possibly avoiding residential care. Also, AT in community settings is probably more prevalent than we currently are aware so more research in this area even in exploratory or beginning phases would add further legitimation for this form of practice for social work/group work and the broader mental health community as well as meet our ethical mission of social justice and access to care for youth in need.

Disclosure statement

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